

REMARKS

As of the 10 July 2008 *Office Action*, Claims 1-13, 45-46, 49-53 are pending in the Application. In the *Office Action*, the Examiner rejects all pending claims. The Applicant thanks the Examiner for careful examination given to the Application. By this *Response*, Applicant amends certain claims to clarify the currently claimed embodiments of the invention. No new matter is believed introduced in this submission as at least ¶[0037] of the *Specification* fully supports the subject matter of the amendments. (see U.S. Patent Application Publication No. 2002/0170648).

Applicant submits this response solely to facilitate prosecution. As such, Applicant reserves the right to present new or additional claims in this Application that have similar or broader scope as originally filed. Applicant also reserves the right to present additional claims in a later-filed continuation application that have similar or broader scope as originally filed. Accordingly, any amendment, argument, or claim cancellation presented during prosecution is not to be construed as abandonment or disclaimer of subject matter.

After entry of this *Response*, Claims 1-13, 45-46, 49-53 are pending in the Application. Applicant respectfully asserts that the pending claims are in condition for allowance over the references of record, and respectfully requests reconsideration of the claims in light of this submission. Applicant, accordingly, believes that the Application is allowable for at least the following reasons.

I. Rejections Under 35 U.S.C. §103

In the *Office Action*, Claims 1-3, 7-9, 13, 49-53 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over U.S. Patent No. 3,284,980 to Dinkel (“Dinkel”) in view of U.S. Patent Application Publication No. 2001/0000738 to Mathieu (“Mathieu”) and U.S. Patent No. 6,931,809 to Brown et al. (“Brown”).

Claims 4 and 10 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Dinkel, in view of Mathieu and Brown, further in view of U.S. Patent No. 3,887,952 to Nicoll Jr. (“Nicoll”).

Claims 5 and 11 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Dinkel, in view of Mathieu and Brown, further in view of U.S. Patent No. 4,828,635 to Flack et al. (“Flack”).

Claims 6 and 12 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Dinkel, in view of Mathieu and Brown, further in view of U.S. Patent No. 4,450,022 to Galer (“Galer”).

Claims 45-46 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Dinkel in view of Brown.

On page 7, the *Office Action* also indicates that Claims 45-46 are rejected under 35 U.S.C. § 103(a) as being unpatentable Mathieu in view of U.S. Patent No. 4,882,888 to Moore (“Moore”). The *Office Action*, however, does not contain a discussion of this rejection. Therefore, Applicant in good faith believes that Claims 45-46 are not actually rejected as being unpatentable over Mathieu in view of Moore, and that the *Office Action* contains a typographical error. Consequently, this rejection will not be further addressed.

The USPTO’s *Examination Guidelines For Determining Obviousness* (“*Obviousness Guidelines*”) implement the Supreme Court’s recently reaffirmed “functional approach” to obviousness determinations, which dictates that “[W]hen considering obviousness of a combination of known elements, the operative question is thus ‘whether the improvement is more than the **predictable use** of prior art elements according to their **established functions**.’” (Examination Guidelines For Determining Obviousness, 72 Fed. Reg. 57527 (Oct. 10, 2007), citing *KSR Int’l Co. v. Teleflex Inc.*, 127 S.Ct. 1727, 1740 (2007).)

The *Obviousness Guidelines* further state that “[T]he key to supporting any rejection under 35 U.S.C. 103 is the **clear articulation** of the reason(s) **why** the claimed invention would have been obvious.” (*Id.* at 57528).

The *Obviousness Guidelines* clearly reflect the Federal Circuit’s requirement that “[R]ejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some **articulated reasoning** with some rational underpinning to support the legal conclusion of obviousness.” *In Re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006).

Claims 1-13, 45-46, 49-53 are patentable because the cited combinations do not teach or suggest **all the claim features**. Further, the features recited in pending claims are not a predictable use of the combined teachings of the cited references.

a. Claims 1-13, 45-46, and 49-51 Are Patentable Over The Cited References

Claims 1, 8, and 45 recite features not disclosed in or taught by the cited references. In particular, these Claims recites an impervious non-cementitious reinforcement web disposed on,

embedded in, or adhered to a lower principal surface of a construction element or panel. The cited references fail to teach or disclose this feature.

As the Examiner acknowledges on page 3 of the *Office Action*, Dinkel discloses a construction element having a reinforcement mesh embedded into the lower principal surface, and does not disclose an impervious non-cementitious reinforcement web. The Examiner alleges that an adhesive layer (element 3) disclosed in Brown corresponds to the claimed reinforcement web. Further, the Examiner states that it would have been obvious to remove Dinkel's reinforcement mesh in the lower principal surface and place Brown's adhesive layer on said surface to arrive at the claimed invention. Applicant respectfully disagrees with the Examiner's conclusions.

Brown's adhesive layer cannot be correlated to the claimed reinforcement web. Brown's adhesive layer comprises an acrylic adhesive agent applied to the surface of an insulation panel attaching said panel to a building sheathing. (Brown, Col. 3, Lns. 18-40). Brown's adhesive layer is not intended to or capable of imparting structural reinforcement to an element onto which it is applied. In contrast, the claimed reinforcement web is a high tensile strength polymer web that serves to strengthen and support a panel element in place of an imbedded mesh material. (Specification, ¶¶[0009]-[0011], [0030], and [0037]). Therefore, replacing Dinkel's mesh with Brown's adhesive layer would not result in a construction panel having a reinforcement web on the lower principal surface, as recited in the claims.

Claim 1 recites that the reinforcement web has a sufficient tensile strength to provide the construction element with a flexural strength capable of supporting loads associated with an element used as an underlayment or backerboard. Brown's adhesive layer does not possess the claimed tensile strength. Brown's adhesive is intended to attach a light insulation panel to plywood sheathing. (Brown, Col. 3, Ln. 65 to Col. 4, Ln. 6). Brown's adhesive could not support a cement panel, moreover it could not reinforce a cement panel and increase its tensile rigidity.

Claim 45 recites that the lower stratum of the construction panel **consists** of a reinforcement web layer. The lower stratum of Dinkel's panel, however, consists of an imbedded mesh material. On page 7 of the *Office Action*, the Examiner alleges that it would have been obvious to include Brown's adhesive layer in Dinkel's lower stratum to provide a water-resistant layer. The Examiner does not, however, provide a rationale from removing the

mesh material from Dinkel's lower stratum. In fact, removing the mesh material from Dinkel's lower stratum and merely replacing it with Brown's adhesive layer would not have been obvious. Dinkel's mesh layer provides structural support to the panel, whereas Brown's adhesive layer merely assists in attaching a panel to a surface. Clearly, removing Dinkel's mesh material and replacing it with Brown's adhesive layer, as suggested by the Examiner, would in fact weaken Dinkel's panel. Consequently, the one of ordinary skill in the art would not attempt such a modification nor would it be obvious since it in fact renders Dinkel's panel less fit for its intended purpose. Therefore, the cited references fail to disclose a construction panel as recited in Claim 45.

Claims 4 and 10 recite the reinforcement web comprising a water impervious paperboard. On page 5 of the *Office Action*, the Examiner acknowledges that Dinkel, Mathieu, and Brown fail to disclose a reinforcement web comprising water impervious paperboard. The Examiner alleges that it would have been obvious to further modify Dinkel's panel, as already modified by the Examiner, to include paperboard as disclosed by Nicoll because it allows for construction of a cheap and easy waterproof layer. Applicant respectfully disagrees with the Examiner's purported rationale. The modification of Dinkel with Brown suggested by the Examiner would allegedly already include a water-resistant layer. Consequently, Nicoll's paperboard would not be necessary for the modified Dinkel panel put forth by the Examiner. Further, the Examiner is unclear exactly as to how Dinkel could be modified to include Nicoll's paperboard after the suggested modification of adding Brown's adhesive layer. Therefore, Applicant respectfully submits that the cited references fail to teach the claimed panel having a paperboard reinforcement web.

Claims 5 and 11 recite the reinforcement web comprising spunbonded olefin. On page 6 of the *Office Action*, the Examiner acknowledges that Dinkel, Mathieu, and Brown fail to disclose a reinforcement web comprising spunbonded olefin. The Examiner alleges that it would have been obvious to further modify Dinkel's panel, as already modified by the Examiner, to include spunbonded as disclosed by Galer because it allows for construction of a water vapor permeable layer and energy cost savings. Applicant respectfully disagrees with the Examiner's purported rationale. The Examiner fails to provide a basis for how the spunbonded olefin would improve energy savings from Dinkel's panel to justify its inclusion in the structure. Further, the Examiner again does not explain how Dinkel, already modified by Brown to include an adhesive

layer, could be further modified to include spenbonded olefin. Therefore, Applicant respectfully submits that the cited reference fail to teach the claimed panel having a spunbonded olefin reinforcement web.

Claims 6 and 12 recite the reinforcement web comprising an alkaline resistant dense polymer fiber mat. On page 6 of the *Office Action*, the Examiner acknowledges that Dinkel, Mathieu, and Brown fail to disclose a reinforcement web comprising an alkaline resistant dense polymer fiber mat. The Examiner alleges that it would have been obvious to further modify Dinkel's panel, as already modified by the Examiner, to include an alkaline resistant dense polymer fiber mat as disclosed by Galer. Applicant respectfully submits that Galer does not disclose an alkaline resistant dense polymer fiber mat. Galer disclose a network of fibers, but does not state that the fibers are polymers, form a mat, or are alkaline resistant, as recited in the Claims. Therefore, Applicant submits that the cited references fail to disclose every feature recited in Claims 6 and 12.

For at least these reasons, the cited references, alone or in combination, fail to disclose, teach or suggest each and every feature of Claims 1, 8, and 45. Thus, Applicant respectfully submits that Claims 1, 8, and 45 are patentable over the cited references, and are in condition for allowance. Further, Claims 2-7, 9-13, 46, and 49-51 are also believed to be in condition for allowance at least due to their dependence upon Claims 1, 8, and 45, and further features defined therein.

b. Claim 52 is Patentable Over The Cited References

Claim 52, as amended, recites features not disclosed in or taught by the cited references. In particular, Claim 52 recites a backerboard panel consisting of: a cementitious core having first surface and a second surface; a reinforcement mesh material embedded in the first surface; and an impervious membrane disposed directly on the second surface, wherein the cementitious core can harden without a carrier web or sheet. The cited references fail to teach or disclose a backerboard panel having these features.

Claim 52 recites that the backerboard has a reinforcement mesh embedded only in the first surface. As discussed above, Dinkel discloses a construction element having a reinforcement mesh in both the upper and lower surfaces. The Examiner suggests removing one of Dinkel's reinforcement meshes and replacing it with an adhesive layer disclosed in Brown. This substitution would not have been obvious, however, because it would weaken Dinkel's

construction element, as previously discussed. Therefore, Applicant respectfully submits that the cited references fail to disclose a backerboard with a reinforcement mesh embedded in only one surface, as recited in Claim 52.

Claim 52 recites that the cementitious core can harden without a carrier web or sheet. This ability is possible due to the impervious membrane on the second surface, which prevents the core from adhering to a supporting surface while it is hardening. Dinkel does not comprise an impervious membrane, and therefore requires a carrier web or sheet during hardening. Brown's adhesive layer, which the Examiner correlates to the impervious membrane, is merely a coating of an adhesive substance, and cannot be applied to Dinkel's core before it hardens. Consequently, Dinkel modified by Brown as suggested by the Examiner would also require a carrier sheet during hardening.

For at least these reasons, Applicant respectfully submits that the cited references, alone or in combination, fail to disclose, teach or suggest each and every feature of Claim 52. Thus, Applicant respectfully submits that Claim 52 is patentable over the cited references, and is in condition for allowance.

c. Claim 53 is Patentable Over The Cited References

Claim 53, as amended, recites features not disclosed in or taught by the cited references. In particular, Claim 8 recites a backerboard panel consisting of: a cementitious core having first surface and a second surface; a reinforcement mesh material embedded in the first surface; a coating disposed atop the first surface; and an impervious membrane disposed directly on the second surface, wherein the backerboard panel is transportable. The cited references fail to teach or disclose a backerboard panel having these features.

Claim 53 recites that the backerboard has a reinforcement mesh embedded only in the first surface. As discussed above, Dinkel discloses a construction element having a reinforcement mesh in both the upper and lower surfaces. The Examiner suggests removing one of Dinkel's reinforcement meshes and replacing it with an adhesive layer disclosed in Brown. This substitution would not have been obvious, however, because it would weaken Dinkel's construction element, as previously discussed. Therefore, Applicant respectfully submits that the cited references fail to disclose a backerboard with a reinforcement mesh embedded in only one surface, as recited in Claim 53.

Claim 53 recites that the backerboard is transportable. In particular, the recited backerboard can be easily transported from a manufacturing facility to a work site. The construction element resulting from the modification of Dinkel with Brown, as suggested by the Examiner, is not transportable. Placing Brown's adhesive layer onto one of Dinkel's surface would result in a construction element having an exposed tacky/adhesive surface. Such an construction element would not be transportable without a carrier sheet. The inclusion of a carrier sheet to make Dinkel's modified construction element transportable, however, would introduce an additional element beyond those recited in Claim 53.

For at least these reasons, Applicant respectfully submits that the cited references, alone or in combination, fail to disclose, teach or suggest each and every feature of Claim 53. Thus, Applicant respectfully submits that Claim 53 is patentable over the cited references, and is in condition for allowance.

II. Fees

Applicant files this *Response* within six months of the *Office Action* with no additional claims beyond those paid for upon filing of the Application. Thus, Applicant believes that a three month extension of time is due, and is paid via EFS-Web. No additional fees are believed due. The Commissioner is authorized, however, to charge any fees that may be required, or credit any overpayment, to Deposit Account No. 20-1507 for full acceptance of this submission, and to keep the Application pending.

III. Conclusion

This *Response* is believed to be a complete response pursuant to 37 CFR §1.121. Applicant respectfully submits that after entry of this *Response* the Application is fully in condition for allowance. The Examiner is invited to contact the undersigned should any other issues remain prior to the allowance of this Application. Early and favorable action is respectfully requested.

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Respectfully submitted,

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